

Appl. No. 10/717,533
Amdt. Dated February 23, 2005
Reply to Office action of January 7, 2005

Docket No.: 120576-5

REMARKS

Claims 1-21 are currently pending in the above-identified patent application. Claims 1-14 and 19-21 have been rejected. Claims 15-18 have been allowed. Applicant has amended claims 1, 2, 8, 9 and 19. No new matter has been added through this amendment.

Claims 1-7 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Bourgeois et al.* (hereinafter "*Bourgeois*"). Applicant has amended claims 1 and 2.

Claim 1 recites a probe for detecting abnormalities in an electrical device having an effective wedge depression of no more than 200 mils between a pair of teeth. The recited probe includes a probe core having first and second sensing end portions and a sense coil wound about the probe core. The probe "is adapted to extend between said pair of teeth and detect abnormalities in the electrical device in a spaced, contact-free relationship between and at least partially above opposed adjacent surfaces of said pair of teeth, forming first and second air gaps between the first and second sensing end portions of the core and the respective opposed adjacent surfaces". Claims 2-7 depend from claim 1.

Bourgeois refers to an apparatus and a method for evaluating a condition of a magnetic circuit of an electric machine. Applicant respectfully submits that *Bourgeois* fails to teach or suggest "a probe for detecting abnormalities in an electrical device having an effective wedge depression of no more than 200 mils between a pair of teeth" and that the "probe is adapted to extend between said pair of teeth" as recited in claim 1. Instead, *Bourgeois* teaches a system and method for positioning a probe in front of a pair of teeth provided on the face of the magnetic circuit of an electrical machine. The probe has spaced apart magnetic prong portions having respective end faces adapted to match the teeth of the pair with the end faces in registry with the teeth. Applicant directs the Examiner to column 3, lines 20-35 of *Bourgeois*, wherein *Bourgeois* teaches that the method includes positioning the probe in front of a pair of teeth of the magnetic circuit of the stator. The magnetic circuit of the probe and the test zone of the stator, which is magnetically coupled with the probe, form a magnetic circuit in test. The magnetic circuit of the probe has a transverse portion, and first and second spaced apart prong portions projecting from the transverse portion on one side thereof. The prong portions have end faces adapted to match the pair of teeth in the test zone, with the end faces in registry with the teeth. Nowhere does *Bourgeois* teach or suggest a method and for detecting abnormalities in an electrical device having an effective wedge depression between a pair of teeth as recited in claim 1.

In view of the above-noted distinctions, Applicant submits that *Bourgeois* does not anticipate independent claim 1. Claims 2-7 depend from claim 1. Claim 2 has been amended so as to have terminology consistent with amended claim 1. Accordingly, Applicants submit that claims 2-7 are allowable by dependency.

Claims 8-14 and 19-21 stand rejected under 35 U.S.C. §103 (a) as being unpatentable over *Bourgeois* in view of *Dailey et al.* (5,557,216) (hereinafter "*Dailey*"). Applicant has amended claims 8, 9 and 19.

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Claims 8 and 19 recite, respectively, a sensing apparatus and a system "for detecting abnormalities in an electrical device having an effective wedge depression of no more than 200 mils between a pair of teeth". Claim 8 recites a probe having a structure through which leakage flux passes. The probe includes a probe core having first and second sensing end portions and a sense coil wound about the probe core. The probe also includes means for supporting the probe to maintain the sensing end portions of the core in a contact-free, spaced, relationship between and at least partially above opposed adjacent surfaces of the pair of teeth. Claims 9-14 depend from claim 8.

Claim 19 recites a probe including a core formed of a material having high initial permeability and high resistivity characteristics and a coil wound about the core. The probe is adapted to extend between the pair of teeth. The system further includes a probe carriage adapted to support the probe so that sensing portions of the core are maintained in a contact-free, spaced relationship between and at least partially above predetermined opposed surfaces of the pair of teeth. Claims 20 and 21 depend from claim 19.

Bourgeois refers to an apparatus and a method for evaluating a condition of a magnetic circuit of an electric machine. Bourgeois teaches that the method includes positioning the probe in front of a pair of teeth of the magnetic circuit of the stator. The magnetic circuit of the probe and the test zone of the stator, which is magnetically coupled with the probe, form a magnetic circuit in test. The magnetic circuit of the probe has a transverse portion, and first and second spaced apart prong portions projecting from the transverse portion on one side thereof. The prong portions have end faces adapted to match the pair of teeth in the test zone, with the end faces in registry with the teeth. Nowhere does Bourgeois teach or suggest a sensing apparatus or a system for detecting abnormalities in an electrical device having an effective wedge depression of no more than 200 mils between a pair of teeth. Further, Bourgeois does not teach or suggest a probe that is adapted to extend between the pair of teeth to detect abnormalities in the electrical device as recited in claims 8 and 19.

Dailey is relied upon in the Office action as disclosing a probe support carriage for moving a probe to a new location. Dailey refers to a system and method to test an electrical generator having a rotor and a stator including a moving carriage sized to fit between the rotor and the stator. Nowhere does Dailey teach or suggest a sensing apparatus or system for detecting abnormalities in an electrical device having an effective wedge depression of no more than 200 mils between a pair of teeth. Further, Dailey does not teach or suggest a probe that is adapted to extend between the pair of teeth to detect abnormalities in the electrical device as recited in claims 8 and 19. Thus, Applicant respectfully submits that claims 8-14 and 19-21 are patentable over the cited references.

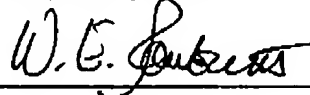
Claims 15-18 have been allowed over the prior art. Applicant respectfully submits that the statement of reasons for the indication of allowable subject matter is incomplete. Applicant respectfully submits that claim 15 is allowable over the prior art not due solely to the presence of one specific element, but also due to the combination of the elements recited therein.

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In view of the above-noted distinctions, applicant submits that claims 1-14 and 19-21 are allowable over the cited references. If the Examiner has any questions regarding the present patent application, the Examiner can call Applicant's attorney, William Powell, at telephone number (518) 387-4530.

Respectfully submitted,



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